

### Remarks

As to the Section 101 rejection, the claims have been amended to recite a useful, concrete and tangible result, namely outputting the spectral transmittances. Support for this amendment is found in Figs. 8-12 and the text corresponding to those drawings, paragraphs [0114] to [0122], which show and discuss the spectral transmittances outputted in the form of graphs.

The “Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility” published in the OG of week 47 in the year 2005, state that for a claim to define a practical application of a section 101 judicial exception, the focus is on whether “the final result achieved by the claimed invention is ‘useful, tangible and concrete.’” A result is “useful” under the guidelines if the utility is specific, substantial and credible. A result is “tangible” if it sets forth a practical application to produce a real-world result. A result is “concrete” if it is substantially repeatable.

The amended independent claims meet the stated requirements of the guidelines. “Outputting” a calculated result (i.e., outputting data calculated according to the claimed method) as a method step is specific, substantial, credible, and real-world. (There would not seem to be any question that the result of the claim is repeatable, and thus concrete.) Accordingly, that step brings the claims within the section 101 exception.

Outputting of calculated data is also a step that is commonly used to bring a data calculation method claim into compliance with section 101. See, e.g., claim 1 of each of US Patents 7,308,366 and 7,197,404. The file history of the ‘366 patent includes a section 101 rejection of claim 1 that was overcome by adding the final step of “outputting estimated characteristics.” Claim 1 of the ‘404 patent was never rejected under section 101, but other claims that did not include the “outputting” step (and that were later canceled) *were* rejected

under section 101. These patents support the conclusion that outputting data meets the section 101 exception as a specific, substantial, credible and real-world step.

Accordingly, the amended claims meet the section 101 requirements set forth in the guidelines. If for any reason the examiner desires to maintain the section 101 rejection, the undersigned would like to discuss the issue with the examiner in an attempt to resolve it; please call.

As to the 102 rejection, the applicant has amended the independent claims and traverses the rejection. Abreu does not disclose the step of “dividing the spectral region into a number of spectral bins that determine a spectral resolution, each bin having a width of about  $0.1\text{ cm}^{-1}$  or less.” Abreu very specifically describes at column 1 lines 22-23, column 3 line 14 and line 53, and column 4 line 53 that the spectral resolution is no smaller than  $2\text{ cm}^{-1}$ , which is *20 times greater* than the spectral resolution set forth in the claims. Abreu thus does not anticipate the claims, nor can it make the claims obvious.

The examiner cited column 4 line 59 through column 5 line 5 of Abreu. However, this is a description of the resolution at which band model parameters were calculated and stored, for use in the transmittance calculations set forth in Abreu. It is *not* a description of the spectral resolution. In other words, this portion of Abreu does *not* relate to the spectral resolution, whereas in the present claims this limitation *does* relate to the spectral resolution. Accordingly, this portion of the reference does not disclose, suggest or even relate to the subject step of the claim.

Thus, both the section 101 and the section 102 rejections have been met. Accordingly, all of the claims are patentable.

If for any reason this Response is found to be incomplete, or if at any time it appears that a telephone conference with counsel would help advance prosecution, please telephone the undersigned in Westborough, Massachusetts, (508) 898-1501.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'B. Dingman', is written over a horizontal line.

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